Title: Bovine Serum Albumin - Protected Synthesis of Highly Fluorescent Gold Nanoclusters for Bio-imaging Applications

G. Kedawat[1,*], B. K. Gupta[1]

[1] Photonic Materials Metrology Sub Division, Advanced Materials and Device Metrology Division, CSIR- National Physical Laboratory, New Delhi, India

Rapid synthesis of bovine serum albumin protected gold nanoclusters (Au NCs) with high fluorescence quantum yield is successfully achieved by wet chemical method. The as-obtained Au NCs show small size distribution, good dispersibility, excellent photostability, non-toxicity as well as strong fluorescence. The size and oxidation state of Au NCs is also affected by the pH value and the nature of the reducing agent. The blue-emitting small Au NCs (pH 8) and red-emitting bigger Au NCs (pH 12) are weakly and covalently bonded to BSA, respectively. The strong emission occurs upon the excitation wavelength at 370 nm for both the cases. Moreover, Au NCs were also explored for fluorescence imaging which make it an ideal candidate as good luminescent probes in biological media for optical imaging *in vitro* and *in vivo*.

Biography

Garima Kedawat has completed his PhD at the age of 29 years from Rajasthan University and doing postdoctoral studies from CSIR- National Physical Laboratory, New Delhi, India. She has published more than 20 papers in reputed journals.

Presenting author details
Full name: Dr. Garima Keadwat
Contact number: 8010344858
Twitter account:
Linked In account:
Session name/ number:
Category: (Oral presentation/ Poster presentation)------ Oral presentation